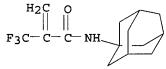
(FILE 'HOME' ENTERED AT 13:10:20 ON 20 MAR 2006)

	FILE 'REGI	STRY' ENTERED AT 13:10:25 ON 20 MAR 2006
L1		STRUCTURE UPLOADED
L2		QUE L1
L3	4999	S L2 FULL
L4	0	S ADAMANTANE CARBOXYLIC ACID ANILIDE
L5	0	S ADAMANTANE CARBOXYLIC ACID ANILINE
L6		STRUCTURE UPLOADED
L7		QUE L6
L8	7591	S L6 FULL
L9		STRUCTURE UPLOADED
L10	4	S L9 FULL
L11		STRUCTURE UPLOADED
L12	16	S L11 FULL
L13	50250	S ANILIDE
L14	7634	S ADAMANTYL OR ADAMANTANE
L15	23	S L13 AND L14
L16	0	S ADAMANTANECARBOXYLIC ACID ANILIDE
L17	293	S ADAMANTANECARBOXYLIC ACID
L18	-	S ADAMANTANECARBOXYLIC ACID ANILINE
L19	50250	S ANILIDE
L20	29317	S ANILINE
L21	0	S ADAMANTYLCARBOXYLIC ACID ANILINE
L22	0	S ADAMANTYLCARBOXYL ANILINE
L23	0	S ADAMANTANECARBOXYL ANILINE
L24	.0	S ADAMANTANECARBOXYLANILINE
L25	0	S ADAMANTANECARBOXYLANILIDE
L26	_	S L17 AND (ANILIDE OR ANILINE)
L27	1901465	S CARBOXYLIC ACID
L28	0	S L15 AND L27
L29		STRUCTURE UPLOADED
L30	-	S L29 FULL
L31		S (ADAMANTANE OR ADAMANTYL) AND CARBOXYLIC ACID AND (ANILINE OR
L32		S (ADAMANTANE OR ADAMANTYL) AND CARBOXY AND (ANILINE OR ANILIDE
L33	6	S ADAMANTANECARBOXY

=>

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ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
     2004:801603 CAPLUS
     141:304291
DN
     Positive photoresist compositions showing high transparency to
ΤI
     157-nm F2 excimer lasers and forming patterns with small line-edge
     roughness and less scums
     Kanda, Hiromi; Mizutani, Kazuyoshi; Kanna, Shinichi
IN
     Fuji Photo Film Co., Ltd., Japan
PΑ
     Jpn. Kokai Tokkyo Koho, 68 pp.
so
     CODEN: JKXXAF
DΤ
     Patent
     Japanese
LA
FAN.CNT 1
                                          APPLICATION NO.
                        KIND
                                                                  DATE
     PATENT NO.
                               DATE
                                            ______
                                                                   -----
     -----
                         _ _ _ _
                                _____
                                         JP 2003-58733
                                                                   20030305
     JP 2004271630
                         A2
                                20040930
PRAI JP 2003-58733
                                20030305
     The compns. comprise (A) resins having (A1) [R1R2CCR3(OR4)] units [R1-R3 =
     H, (fluoro)alkyl, F; R4 = H, (fluoro)alkyl, L1X; X = polar group, alkaline
     developer-soluble group, group solubilized in alkaline developers by acids; L1
     single bond, divalent linking group] and (A2) [R5R6CCR7(CONR8R9)] units
     [R5-R7 = same \ as \ R1; \ R8, \ R9 = H, \ (fluoro)alkyl, \ L2Y; \ Y = same \ as \ X; \ L2 =
     same as L1] and (B) compds. generating acids by (actinic ray) radiation.
IT
     679804-95-6P
     RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
     (Reactant or reagent)
        (monomers; pos. photoresist compns. showing high transparency
        to F2 excimer lasers and forming patterns with small line-edge
        roughness and less scums)
RN
     679804-95-6 CAPLUS
     2-Propenamide, N-tricyclo[3.3.1.13,7]dec-1-yl-2-(trifluoromethyl)- (9CI)
CN
     (CA INDEX NAME)
```



L24 AN DN	ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN 2004:753223 CAPLUS 141:268557
TI	Positive resist composition and method of forming a
IN	resist pattern using the same Sasaki, Tomoya
PΆ	Fuji Photo Film Co., Ltd., Japan
so	Eur. Pat. Appl., 80 pp.
DT	CODEN: EPXXDW Patent
	English
FAN.	CNT 1
	PATENT NO. KIND DATE APPLICATION NO. DATE
PΙ	EP 1457819 A2 20040915 EP 2004-4961 20040303
	EP 1457819 A3 20050622
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK
	JP 2004279471 A2 20041007 JP 2003-67010 20030312
	US 2006035165 A1 20060216 US 2004-796083 20040310
PRAI	JP 2003-67010 A 20030312

AB A pos. **photoresist** composition comprises (A) a resin comprising specific repeating units and coming to have enhanced solubility in an alkaline developing solution by the action of an acid and (B) a compound generating an acid by the action of actinic rays or a radiation.

IT 756532-38-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. photoresist composition for forming resist pattern)

RN 756532-38-4 CAPLUS

CN 2-Propenamide, N-(3,5-dihydroxytricyclo[3.3.1.13,7]dec-1-yl)-2-(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1 '

CRN 677354-83-5 CMF C14 H18 F3 N O3

$$H_2C$$
 O $H_3C-C-C-NH$ OH

CM 2

CRN 585573-59-7 CMF C18 H16 F12 O4

$$F_3C-C$$
 CF_3
 $C-CF_3$
 $C-C$

L24 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:631975 CAPLUS

DN 141:181966

TI Proton-neutralizing agent and photoresist containing the same

IN Kuzuha, Noboru

PA Aibaitsu K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004217867	A2	20040805	JP 2003-9721	20030117
DDAT .TD 2003-9721		20030117		

AB The agent well neutralizes proton generated in dark during the storage of photoresist and is inert under exposure of the resist.

IT 151476-40-3P 733037-96-2P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(proton-neutralizing agent and photoresist containing the same)

RN 151476-40-3 CAPLUS

CN Carbamic acid, tricyclo[3.3.1.13,7]dec-1-yl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 733037-96-2 CAPLUS

CN Carbamic acid, tricyclo[3.3.1.13,7]dec-2-yl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L24 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:307716 CAPLUS

DN 140:347549

TI Positive-working resist binder resins having alicyclic hydrocarbon group

IN Sasaki, Tomoya; Mizutani, Kazuyoshi; Kanna, Shinichi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 95 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND APPLICATION NO. DATE DATE ---------_____ JP 2004117535 A2 20040415 JP 2002-277570 20020924 PΤ PRAI JP 2002-277570 20020924

The compns., which show high transparency to 157-nm F2 excimer laser, high sensitivity, high resolution, and good dry-etching resistance, contain (A) resins which have (a) a repeating unit I [Ra1-Ra3 H, halo, cyano, alkyl; Ra4 = H, halo, OH, cyano, alkyl, aryl, alkoxy, aralkyl; n = 1-5; Z = $C \ge 7$ (n + 2)-valent alicyclyl; Q = acid-decomposable group; L1, L2 = direct bond, linking group] and (b) ≥1 repeating unit selected from (CRb1Rb2CRb3b4) (Rb1-Rb4 = H, halo, alkyl; \geq 2 of Rb1-Rb4 = F), [CRc1Rc2CRc3(CO2R1)] (Rc1-Rc3 = H, F, Cl, fluoroalkyl, cyano; ≥1 of Rc1-Rc3 = group other than H; R1 = H, acid-decomposable group, other organic group), [CRd1Rd2CRd3(CONR2R3)] (Rd1-Rd3 = any group given for Rc1-Rc3; R2, R3 = H, alkyl, cycloalkyl, aryl, aralkyl), [CRe1Re2CRe3(CN)] (Re1-Re3 = any group given for Rc1-Rc3), [CRf1Rf2CRf3(SO2Z1R6)] (Rf1-Rf3 = any group given for Rc1-Rc3; Z1 = direct bond, O, NR7; R6 = H, alkyl, cycloalkyl, aryl, aralkyl; R7 = H, alkyl, cycloalkyl), and [CRg1(CO2Y4)CRg3(CO2Y3)] (Rq1, Rq3 = H, halo, cyano, alkyl; Y3, Y4 = H, acid-decomposable group, other organic group) and show increased solubility in an alkaline developer

upon

action of acids and (B) compds. which generate acids upon irradiation with actinic rays or radiation.

IT 679804-96-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos.-working resists with high sensitivity to F2 excimer laser and good dry-etching resistance containing binder resins which have acid-decomposable group via alicyclic structure)

RN 679804-96-7 CAPLUS

CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(ethenyloxy)-2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,1,2,3,3,3-hexafluoro-1-propene and N-tricyclo[3.3.1.13,7]dec-1-yl-2-(trifluoromethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

1

CRN 679804-95-6 CMF C14 H18 F3 N O

$$\begin{array}{c|c} ^{H_2C} & o \\ \parallel & \parallel \\ F_3C-C-C-NH \end{array}$$

CM 2

CRN 679804-76-3 CMF C15 H21 F3 O3 CCI IDS

 $H_2C = CH - O - D1$

CM 3

CRN 116-15-4 CMF C3 F6

L24 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:291622 CAPLUS

DN 140:329533

TI Positive-working **photoresist** composition containing specific resin

IN Sasaki, Tomoya; Mizutani, Kazuyoshi; Kanna, Shinichi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 83 pp.

CODEN: JKXXAF

DT Patent LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2004109834	A2	20040408	JP 2002-275241	20020920
PRAI	JP 2002-275241		20020920		

AB The title composition contains aresin increasing the solubility in an alkali solution

by an acid and an actinic ray- or radiation sensitive acid-generator, wherein the resin has repeating unit [-C(R1)(R2)-C(R3)(-O-L1-[C(C(R21R22R23))(C(R24R25R26))]n-L2-C(OZa)(C(R27R28R29))(C(R30R31R32)))] (r1-3 = H, halo, cyano, alkyl; R21-32 = H, F, alkyl; L1-2 = single bond, 2-valent connecting group; n = 0, 1) and repeating unit containing the structure -[C(R4)(R5)]m-Z1-(X)p (R4-5 = alkyl; Z1 = (p+1)-valent alicyclic hydrocarbon; X = F, Cl, OH< etc.; m = 0, 1; p = integer 1-4). Composition is suitable for exposure beam of \leq 160 nm and show good characteristics on development, image formation, dry etching resistance, etc.

IT 677354-85-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(resin in pos.-working photoresist composition)

RN 677354-85-7 CAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with N-(3,5-dihydroxytricyclo[3.3.1.13,7]dec-1-yl)-2(trifluoromethyl)-2-propenamide, 3-[1-(ethenyloxy)-2,2,2-trifluoro-1(trifluoromethyl)ethyl]-α,α-bis(trifluoromethyl)cyclohexanemet
hanol and 1-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-3-[1(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexane (9CI)
(CA INDEX NAME)

CM 1

CRN 677354-84-6 CMF C17 H20 F12 O3

$$\begin{array}{c|cccc} CF_3 & CF_3 \\ & & C\\ F_3C-C & C-CF_3 \\ & C-CF_2 \\ & C-CH_2-OEt \end{array}$$

CM 2

CRN 677354-83-5 CMF C14 H18 F3 N O3

CM 3

CRN 677354-82-4 CMF C14 H14 F12 O2

$$\begin{array}{c|cccc} \text{CF}_3 & \text{CF}_3 \\ \hline F_3\text{C--C} & \text{C--CF}_3 \\ \hline \text{OH} & \text{O--CH----CH}_2 \end{array}$$

CM 4

CRN 188739-86-8 CMF C15 H19 F3 O2

L24 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:219910 CAPLUS

DN 140:278422

TI Chemical amplification type resist composition

IN Takata, Yoshiyuki; Yoshida, Isao; Nakanishi, Hirotoshi

PA Sumitomo Chemical Company, Limited, Japan

SO U.S. Pat. Appl. Publ., 22 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

T. 1274 *	CMII				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 2004053171	A1	20040318	US 2003-657149	20030909
	CN 1488996	A	20040414	CN 2003-156561	20030909
	JP 2004126572	A2	20040422	JP 2003-319438	20030911
PRAI	JP 2002-266539	Α	20020912		
os	MARPAT 140:278422				

AB The present invention provides a chemical amplification type pos. resist composition comprising (1) a nitrogen containing compound of the formula A(-X-N(R13)C(=0)R14)n or A(-X-C(=0)N(R15)R16)n (A = alicyclic hydrocaron group; X = C1-4 alkylene, single bond; R13-16 = H, C1-12 alkyl, C3-12 cycloalkyl, C1-12 haloalkyl, etc.; n = 1-5); (2) resin which contains a structural unit having an acid labile group and which itself is insol. or poorly soluble in an alkali aqueous solution but becomes soluble in an alkali aqueous solution

by the action of an acid; and (3) an acid generator of the formula I (Q1-5 = H, hydroxyl, C1-12 alkyl, alkoxy; Z+ = II (P1-3 = H, hydroxyl, C1-6 allyl and alkoxy), III (P4,5 = H, hydroxyl, C1-6 allyl and alkoxy), P6P7S+-CH(P8)C(=0)P9 (P6,7 = C1-6 alkyl, C3-10 cycloalkyl, etc.; P8 = H; P9 = C1-6 alkyl, C3-10 cycloalkyl, aromatic group, etc.)).

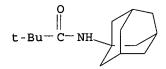
IT 133216-43-0P 187868-22-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
 (chemical amplification type resist composition containing)

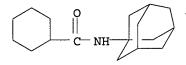
RN 133216-43-0 CAPLUS

CN Propanamide, 2,2-dimethyl-N-tricyclo[3.3.1.13,7]dec-1-yl- (9CI) (CA INDEX NAME)



RN 187868-22-0 CAPLUS

CN Cyclohexanecarboxamide, N-tricyclo[3.3.1.13,7]dec-1-yl- (9CI) (CA INDEX NAME)

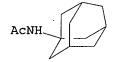


IT 880-52-4

RL: TEM (Technical or engineered material use); USES (Uses) (chemical amplification type resist composition containing)

RN 880-52-4 CAPLUS

CN Acetamide, N-tricyclo[3.3.1.13,7]dec-1-yl- (9CI) (CA INDEX NAME)



L24 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:671498 CAPLUS

DN 139:188320

TI Positive photoresists showing superior transparency to 157-nm light and excellent sensitivity

IN Sasaki, Tomoya; Mizutani, Kazuyoshi; Kanna, Shinichi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 46 pp. CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2003241381 A2 20030827 JP 2002-46284 20020222

PRAI JP 2002-46284 20020222

AB The photoresists, useful for F2 excimer laser lithog., comprise (A) resins increasing alkali solubility upon acid action and having repeating unit CR1R2CR3(L1XNHR4) (R1-R3 = H, Cl, CN, Me, F, fluoroalkyl, where ≥1 of them is F or fluoroalkyl; L1 = single bond, bivalent bridging group; X = CO, SO2; R4 = monovalent organic group) and (B) radiation-sensitive acid generators.

IT 581804-50-4P 581804-51-5P 581804-54-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(binders; chemical amplified pos. photoresists containing fluoro-containing acid-labile binders showing high transparency to 157-nm light)

RN 581804-50-4 CAPLUS

CN 2-Propenamide, 2-fluoro-N-tricyclo[3.3.1.13,7]dec-2-yl-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 581804-48-0 CMF C13 H18 F N O

CM 2

CRN 95418-58-9 CMF C12 H16 O

RN 581804-51-5 CAPLUS

CN 2-Propenamide, 2-fluoro-N-tricyclo[3.3.1.13,7]dec-2-yl-, polymer with 1-cyclohexyl-4-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 581804-48-0 CMF C13 H18 F N O

CM 2

CRN 326591-95-1 CMF C24 H30 O3

RN 581804-54-8 CAPLUS

CN 2-Propenamide, 2-fluoro-N-(2,2,3,3,3-pentafluoropropyl)-, polymer with N-(2-methyltricyclo[3.3.1.13,7]dec-2-yl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 581804-53-7 CMF C6 H5 F6 N O

CM 2

CRN 581804-52-6 CMF C14 H21 N O

IT 581804-48-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(chemical amplified pos. photoresists containing fluoro-containing acid-labile

binders showing high transparency to 157-nm light)

RN 581804-48-0 CAPLUS

CN 2-Propenamide, 2-fluoro-N-tricyclo[3.3.1.13,7]dec-2-yl- (9CI) (CA INDEX NAME)

L24 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:900855 CAPLUS

DN 138:9649

TI Alicyclic hydrocarbyl compounds, their alkali-insoluble polymers, and radiation-sensitive polymer compositions

IN Takao, Yasuyuki; Yamaoka, Tsugio; Seyano, Akimasa; Murata, Makoto

PA JSR Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND DATE		APPLICATION NO.	DATE
ΡI	JP 2002338629	A2	20021127	JP 2001-143899	20010514
PRAI	JP 2001-143899		20010514		

OS MARPAT 138:9649

AB The compds. comprise CH2:CR2C(:0)NR1C(:0)CR3:CH2 (I; R1 = C4-20 alicyclic hydrocarbyl; R2, R3 = H, C1-3 alkyl). The polymers, prepared by polymerization of

I and copolymerizable organic compds. having acid-dissociating groups, show alkali solubility in dissociation of the acid-dissociating groups by acids.

The

compns. contain the polymers and radiation-sensitive acid generators. The compns. show high transparency for far UV light, good thermal stability, and high dry etching resistance.

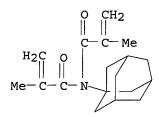
IT 476677-46-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(polymers of alicyclic hydrocarbons with good thermal stability for far-UV resists)

RN 476677-46-0 CAPLUS

CN 2-Propenamide, 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-tricyclo[3.3.1.13,7]dec-1-yl-(9CI) (CA INDEX NAME)



IT 476677-48-2DP, reaction products with dihydropyran

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymers of alicyclic hydrocarbons with good thermal stability for far-UV resists)

RN 476677-48-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-tricyclo[3.3.1.13,7]dec-1-yl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 476677-46-0 CMF C18 H25 N O2

CM 2

CRN 79-41-4 CMF C4 H6 O2

$$\begin{array}{c} \text{CH}_2 \\ || \\ \text{Me-C-CO}_2 \text{H} \end{array}$$

L24 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:480050 CAPLUS

DN 137:70509

TI Maleimide-type polymers and chemically amplified **photoresist** compositions therewith

IN Horai, Akira; Funaki, Katsunori

PA Daicel Chemical Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp. CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND DATE		APPLICATION NO.	DATE
					
ΡI	JP 2002179744	A2	20020626	JP 2000-378769	20001213
PRAT	JP 2000-378769		20001213		

AB The photoresists, showing excellent dry etching resistance and adhesion to substrates, contain maleimide-type polymers bearing I [Z = (substituted) polycyclic hydrocarbon ring; X = alkylene; n = 0, 1] and photoacid generators.

IT 54395-92-5P, N-1-Adamantylmaleamic acid

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(adamantylmaleimide-containing polymers for chemical amplified photoresists with superior etching resistance)

RN 54395-92-5 CAPLUS

CN 2-Butenoic acid, 4-oxo-4-(tricyclo[3.3.1.13,7]dec-1-ylamino)-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

AN 2000:806417 CAPLUS

DN 134:200423

TI Development of advanced ArF resist using alicyclic methacrylate copolymer: the optimum quenchers for this copolymer

AU Wakisaka, Yukiya; Fujiwara, Tadayuki; Tooyama, Masayuki; Kuwano, Hideaki; Nishida, Koji

CS Corporate Research Labs., Mitsubishi Rayon Co., Ltd., Otake, Hiroshima, Japan

SO Proceedings of SPIE-The International Society for Optical Engineering (2000), 3999(Pt. 2, Advances in Resist Technology and Processing XVII), 1088-1099

CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB The authors have investigated alicyclic methacrylate copolymers for pos. ArF resist. The resist utilizing developed copolymer had high sensitivity and high resolution When any quenchers were not added, the limited resolution of the developed resist was by 0.14 μm L/S. The authors carried out the investigation of quencher in order to improve the resolution of the resist. The amide compds. were effective as quenchers for this system, and a certain kind of an amide compound made the resist profiles good. The authors also studied the relationship between the resist performance and the basicity or the polarity of the basic organic compds. used as quencher.

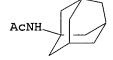
IT 880-52-4, N-(1-Adamantyl) acetamide

RL: PRP (Properties)

(quencher; quencher polarity effect on lithog. performance of advanced ArF chemical amplified **photoresist** based on alicyclic methacrylate copolymer)

RN 880-52-4 CAPLUS

CN Acetamide, N-tricyclo[3.3.1.13,7]dec-1-yl- (9CI) (CA INDEX NAME)



RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:590836 CAPLUS

DN 129:283430

TI Positive-working photosensitive composition containing acid generator and polymer having adamantyl group

IN Aogo, Toshiaki; Sato, Kenichiro; Tan, Shiro

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 2

FAN.	CNT 2				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10239847	A2 -	19980911	JP 1997-46000	19970228
	US 6042991	Α	20000328	US 1998-25451	19980218
	US 6416925	B1	20020709	US 2000-497281	20000202
PRAI	JP 1997-33958	Α	19970218		
	JP 1997-46000	Α	19970228		
	US 1998-25451	A3	19980218		

AB The title composition contains a compound generating acid upon active ray or 7/165.054

radiation irradiation and a resin having ≥1 repeating unit containing an adamantyl group I, II, or III [R1, R2, R5, R8, R9 = H, halo, CN, alkyl, haloalkyl; R4, R7, R10 = halo, CN, (substituted) alkyl, (substituted) alkenyl, (substituted) alkynyl, COOR11; R3, R6, R11 = H, (substituted) alkyl, (substituted) monocyclic or polycyclic cycloalkyl, (substituted) alkenyl, group that is decomposed by the action of acid to increase the solubility in alkaline developing solns.; X1-5 = single bond, divalent alkylene,

cycloalkylene, O, S, NR12R13; R12 = H, alkyl, monocyclic or polycyclic cycloalkyl, alkenyl; R13 = single bond or divalent alkylene, cycloalkylene or alkenylene which may have ether, ester, amido, urethane or ureido group; l, m, n = 0-3] and ≥1 group that is decomposed by the action of acid to increase the solubility in alkaline developing solns. The composition shows

high sensitivity toward light of wavelength \leq 250 nm, especially \leq 220 nm, and high solubility in solvents and provides high resolution patterns with good dry etch resistance.

IT 213820-24-7P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos.-working photosensitive composition containing acid generator and polymer

having adamantyl group)

RN 213820-24-7 CAPLUS

CN 2-Pentenedioic acid, polymer with 1-methylcyclohexyl 2-methyl-2-propenoate and methyl 2-methylene-4-oxo-4-(tricyclo[3.3.1.13,7]dec-1-ylamino)butanoate (9CI) (CA INDEX NAME)

CM 1

CRN 213820-23-6 CMF C16 H23 N O3

CM 2

CRN 76392-14-8 CMF C11 H18 O2

CM 3

CRN 1724-02-3 CMF C5 H6 O4

$$HO_2C-CH_2-CH-CO_2H$$

IT 57277-38-0P

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation and polymerization of)

RN 57277-38-0 CAPLUS

CN 2-Butenoic acid, 4-oxo-4-(tricyclo[3.3.1.13,7]dec-1-ylamino)- (9CI) (CA INDEX NAME)

L24 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:620074 CAPLUS

DN 124:131526

TI Positively working resist composition containing carboxamide compound

IN Oie, Masayuki; Tanaka, Hideyuki; Abe, Nobunori; Misawa, Mari

PA Nippon Zeon Co, Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

FAM.CIVI I				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07092681	A2	19950407	JP 1993-312672	19931118
PRAI JP 1993-312672	Α	19931118		
JP 1993-185472		19930629		

AB The composition contains (A) an acid-generating compound by active beam-irradiation,

(B) a polymer having a structure unit with an acid-unstable group to cleave and be alkali-soluble in the presence of an acid from A, and (C) a carboxamide compound, optionally containing (D) an alkali-soluble phenolic resin.

The composition is useful for fine processing in manufacture of semiconductor devices. The composition showed high sensitivity and gave high-resolution images

with etching resistance and storage stability.

IT 19026-84-7

RL: TEM (Technical or engineered material use); USES (Uses)

(pos.-working resist composition containing carboxamide compound for manufacture of

semiconductor device)

RN 19026-84-7 CAPLUS

CN Benzamide, N-tricyclo[3.3.1.13,7]dec-1-yl- (9CI) (CA INDEX NAME)

